

## § 164.37

(3) Water depth twice the vessel's draft or greater;

(4) Clean hull; and

(5) Intermediate drafts or unusual trim.

(h) An echo depth sounding device.

(i) A device that can continuously record the depth readings of the vessel's echo depth sounding device, except when operating on the Great Lakes and their connecting and tributary waters.

(j) Equipment on the bridge for plotting relative motion.

(k) Simple operating instructions with a block diagram, showing the change-over procedures for remote steering gear control systems and steering gear power units, permanently displayed on the navigating bridge and in the steering gear compartment.

(l) An indicator readable from the centerline conning position showing the rate of revolution of each propeller, except when operating on the Great Lakes and their connecting and tributary waters.

(m) If fitted with controllable pitch propellers, an indicator readable from the centerline conning position showing the pitch and operational mode of such propellers, except when operating on the Great Lakes and their connecting and tributary waters.

(n) If fitted with lateral thrust propellers, an indicator readable from the centerline conning position showing the direction and amount of thrust of such propellers, except when operating on the Great Lakes and their connecting and tributary waters.

(o) A telephone or other means of communication for relaying headings to the emergency steering station. Also, each vessel of 500 gross tons and over and constructed on or after June 9, 1995 must be provided with arrangements for supplying visual compass-readings to the emergency steering station.

(92 Stat. 1471 (33 U.S.C. 1221 *et seq.*); 49 CFR 1.46(n)(4))

[CGD 74-77, 42 FR 5956, Jan. 31, 1977, as amended by CGD 77-183, 45 FR 18925, Mar. 24, 1980; CGD 83-004, 49 FR 43466, Oct. 29, 1984; CGD 83-043, 60 FR 24771, May 10, 1995; 60 FR 28834, June 2, 1995]

## 33 CFR Ch. I (7-1-08 Edition)

### § 164.37 Equipment: Vessels of 10,000 gross tons or more.

(a) Each vessel of 10,000 gross tons or more must have, in addition to the radar system under § 164.35(a), a second marine radar system that operates independently of the first.

NOTE: Independent operation means two completely separate systems, from separate branch power supply circuits or distribution panels to antennas, so that failure of any component of one system will not render the other system inoperative.

(b) On each tanker of 10,000 gross tons or more that is subject to 46 U.S.C. 3708, the dual radar system required by this part must have a short range capability and a long range capability; and each radar must have true north features consisting of a display that is stabilized in azimuth.

(Titles I and II, 86 Stat. 426, 427 (33 U.S.C. 1224; 46 U.S.C. 391(a); 49 CFR 1.46(n)(4))

[CGD 77-016, 43 FR 32112, July 24, 1978, as amended by CGD 79-033, 44 FR 26741, May 7, 1979; CGD 79-033, 47 FR 34389, Aug. 9, 1982; USCG-1998-3799, 63 FR 35532, June 30, 1998]

### § 164.38 Automatic radar plotting aids (ARPA).

(a) The following definitions are used in this section—

*Bulk* means material in any quantity that is shipped, stored, or handled without benefit of package, label, mark or count and carried in integral or fixed independent tanks.

*Constructed* means a stage of construction where—

(1) The keel is laid;

(2) Construction identifiable with a specific ship begins; or

(3) Assembly of that ship has commenced comprising at least 50 tons or 1 percent of the estimated mass of all structural material, whichever is less.

*Hazardous material* means—

(1) A flammable liquid as defined in 46 CFR 30.10-22 or a combustible liquid as defined in 46 CFR 30.10-15;

(2) A material listed in table 151.05 of 46 CFR 151.05, table 1 of 46 CFR 153, or table 4 of 46 CFR Part 154; or

(3) A liquid, liquefied gas, or compressed gas listed in 49 CFR 172.101.

*Self-propelled vessel* includes those combinations of pushing vessel and vessel being pushed ahead which are rigidly connected in a composite unit

and are required by Rule 24(b) of the International Regulations for Preventing Collisions at Sea, 1972 (72 COLREGS) (App. A to 33 CFR Part 81) to exhibit the lights prescribed in Rule 23 for a "Power Driven Vessel Underway".

*Tank vessel* means a vessel that is constructed or adapted to carry; or carries, oil or hazardous materials in bulk as cargo or cargo residue.

(b) An Automatic Radar Plotting Aid (ARPA) that complies with the standard for such devices adopted by the International Maritime Organization in its "Operational Standards for Automatic Radar Plotting Aids" (Appendix A), and that has both audible and visual alarms, must be installed as follows:

(1) Each self-propelled vessel, except a public vessel, of 10,000 gross tons or more carrying oil or hazardous materials in bulk as cargo or in residue on the navigable waters of the United States, or which transfers oil or hazardous materials in any port or place subject to the jurisdiction of the United States, must be equipped with an ARPA.

(2) Each tank vessel of 10,000 gross tons or more operating on the navigable waters of the United States must be equipped with an ARPA.

(3) Each self-propelled vessel of 15,000 gross tons or more that is not a tank vessel, and is not carrying oil or hazardous material in bulk as cargo or in residue operating on the navigable waters of the United States, and was constructed before September 1, 1984, must be equipped with an ARPA, except when it is operating on the Great Lakes and their connecting and tributary waters.

(4) Each vessel of 10,000 gross tons or more, except when operating on the Great Lakes and their connecting and tributary waters, constructed on or after September 1, 1984 must be equipped with an ARPA.

(c) [Reserved]

(d)(1) Each device required under paragraph (b) of this section must have a permanently affixed label containing:

(i) The name and address of the manufacturer; and

(ii) The following statement:

"This device was designed and manufactured to comply with the International Maritime Organization (IMO) 'Performance Standards for Automatic Radar Plotting Aids (ARPA).'"

(2) Each device allowed under paragraph (c) of this section must have a permanently affixed label containing:

(i) The name and address of the manufacturer; and

(ii) The following statement:

"This device was designed and manufactured to comply with the U.S. Maritime Administration's 'Collision Avoidance System Specification.'"

#### APPENDIX A TO § 164.38—PERFORMANCE STANDARDS FOR AUTOMATIC RADAR PLOTTING AIDS (ARPA)

##### 1 Introduction

1.1 The Automatic Radar Plotting Aids (ARPA) should, in order to improve the standard of collision avoidance at sea:

.1 Reduce the work-load of observers by enabling them to automatically obtain information so that they can perform as well with multiple targets as they can by manually plotting a single target; and

.2 Provide continuous, accurate and rapid situation evaluation.

1.2 In addition to the General Requirements for Electronic Navigational Aids ([IMO] Res. A.281(VII)), the ARPA should comply with the following minimum performance standards.

##### 2 Definitions

2.1 Definitions of terms in these performance standards are given in Annex 1.

##### 3 Performance Standards

###### 3.1 Detection

3.1.1 Where a separate facility is provided for detection of targets, other than by the radar observer, it should have a performance not inferior to that which could be obtained by the use of the radar display.

###### 3.2 Acquisition

3.2.1 Target acquisition may be manual or automatic. However, there should always be a facility to provide for manual acquisition and cancellation. ARPA with automatic acquisition should have a facility to suppress acquisition in certain areas. On any range scale where acquisition is suppressed over a certain area, the area of acquisition should be indicated on the display.

3.2.2 Automatic or manual acquisition should have a performance not inferior to that which could be obtained by the user of the radar display.

###### 3.3 Tracking